

PATENT SPECIFICATION

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(54) IMPROVEMENTS IN OR RELATING TO ANKLE EXERCISING DEVICES

(71) We, JONAS WOODHEAD LIMITED, a British Company, of Kirkstall Road, Leeds, LS4 2AQ, do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to ankle exercising devices, an example of which is a "wobble board" on which a patient balances on hemispherical or other dome-shaped support. However, this requires a variety of sizes and/or shapes of support to accommodate improved performances and elicits an all or nothing response with an abrupt stop at the extremities of movement when an edge of the board meets the floor.

The primary object of the invention is to provide an ankle exercising device affording controlled resistance to movement, and a secondary object is to provide means of adjusting the range of movement to accommodate improved performance.

According to the present invention, an ankle exercising device comprises a base, a foot supporting board, and a coil compression spring connected between the base and the foot support board, to enable the board, when in use, to be tilted in any direction out of parallelism with a surface supporting the base, against the restoring force of the spring.

The end turns of the coil spring are preferably secured to the base and the underside of the foot supporting board respectively by clips, and these turns are also preferably located by rings upstanding from the base and depending from the foot supporting board respectively.

The base is preferably provided with a plurality of upstanding stop members spaced around the coil spring and adjustable in height, to provide for adjusting the range of movement to accommodate improved performance. The adjustable stop members

are preferably four in number, at the same radial distance from the axis of the coil spring and equi-spaced around the coil spring, and preferably consist of pillars upstanding from the base and coaxial setscrews with locknuts to secure them in adjusted position. The heights of the adjustable stop members may be different so as to afford a graduated increase in range of movement in different directions of rocking.

The centre of the foot supporting board is preferably connected to an upstanding support on the base by a joint allowing rocking of the foot supporting board in any direction, and the joint is preferably a bonded rubber bush, affording resilience at the pivot or rocking point and also enabling the coil spring to be in unstressed condition when the device is not in use.

The upper surface of the foot supporting board is preferably provided with rubber or other non-slip material.

One embodiment of the invention will now be described, by way of example only, with reference to the accompanying drawing, which is a part-sectional side elevation of the device.

The ankle exercising device shown in the drawing comprises a base 1, a support 2 upstanding from the base, a foot supporting board 3 with rubber 4 on its upper surface and connected to the upstanding support by a joint 5 consisting of a bonded rubber bush allowing rocking of the foot support board in any direction, a coil compression spring 6 encircling the upstanding support and the rubber joint between the base and the foot supporting board, the end turns of the spring being secured to the base and the underside of the foot supporting board respectively by clips 7A, 7B and being located by rings 8A, 8B upstanding from the base and depending from the foot supporting board respectively, and four stop members 9 of adjustable height at the same radial distance from the upstanding support and equi-spaced around

the upstanding support and the encircling spring, the adjustable stop members consisting of pillars 10 upstanding from the base and coaxial setscrews 11 with locknuts 12 to secure them in adjusted position.

5 The coil spring 6 affords controlled resistance to rocking movement of the foot supporting board 3 in any direction with respect to the base 1, against the restoring force of the spring, and the adjustable stop members 9 provide for adjusting the range of movement to accommodate improved performance, different heights of the stop members affording a graduated increase in range of movement in different directions of rocking.

10 The bonded rubber bush joint 5 affords resilience at the pivot or rocking point of the foot supporting board 3 and also enables the coil spring 6 to be in unstressed condition when the device is not in use.

20 WHAT WE CLAIM IS:—

1. An ankle exercising device comprising a base, a foot supporting board and a coil compression spring connected between the base and the foot supporting board, to enable the board, when in use, to be tilted in any direction out of parallelism with a surface supporting the base, against the restoring force of the spring.

2. A device as in Claim 1, wherein the end turns of the coil spring are secured to the base and the underside of the foot supporting board respectively by clips.

3. A device as in Claim 2, wherein the end turns of the coil spring are located by-rings

upstanding from the base and depending from the foot supporting board respectively.

4. A device as in any one of Claims 1 to 3, wherein the base is provided with a plurality of upstanding stop members spaced around the coil spring and adjustable in height.

5. A device as in Claim 4, wherein the stop members are four in number, at the same radial distance from the axis of the coil spring and equi-spaced around the coil spring.

6. A device as in Claim 5, wherein the stop members consist of pillars upstanding from the base and coaxial setscrews with locknuts to secure them in adjusted position.

7. A device as in any one of Claims 1 to 6, wherein the centre of the foot supporting board is connected to an upstanding support on the base by a joint allowing rocking of the foot supporting board in any direction.

8. A device as in Claim 7, wherein the joint between the foot supporting board and the upstanding support is a bonded rubber bush.

9. A device as in any one of Claims 1 to 8, wherein the upper surface of the foot supporting board is provided with rubber or other non-slip material.

10. An ankle exercising device substantially as hereinbefore described with reference to the accompanying drawing.

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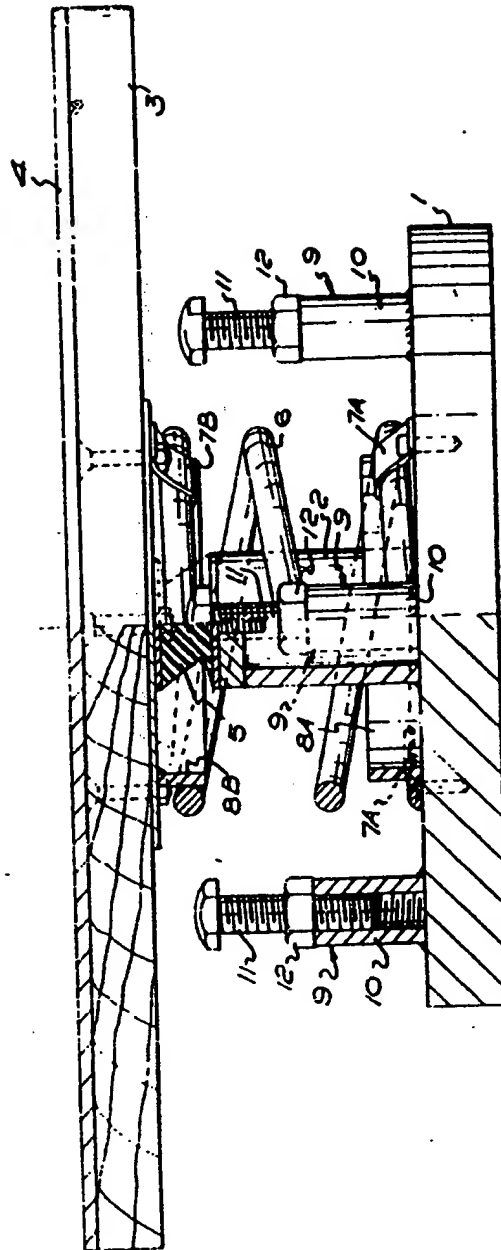
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COMPLETE SPECIFICATION

1 SHEET

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